

WHAT IS CLAIMED IS:

1. In a method for preparing a polypeptide in  
a cellular host, where the polypeptide is heterologous to  
5 the host and may be expressed in low percentage amounts  
of total protein, the improvement which comprises:

joining an open reading frame DNA sequence  
coding for said polypeptide with a second open reading  
frame DNA sequence coding for a heterologous ubiquitin,  
10 to form a fusion polypeptide;

introducing the sequence coding for said fusion  
polypeptide under conditions for expression in said host,  
whereby said fusion polypeptide is expressed; and

isolating said fusion polypeptide to provide  
15 said second polypeptide in high yield.

2. A method according to Claim 1, wherein  
said host is a eukaryotic host.

20 3. A method according to Claim 2, wherein  
said eukaryotic host is yeast.

4. A method according to Claim 3, wherein  
said DNA sequences are under the transcriptional  
25 regulatory control of a transcriptional initiation  
regulatory region comprising a promoter region for a  
glycolytic enzyme.

5. A method according to Claim 4, wherein  
30 said transcriptional initiation regulatory region is  
inducible.

6. A method according to Claim 1, where said  
host is prokaryotic.

7. A method according to Claim 6, wherein said prokaryotic host is *E. coli*.

5 8. A method according to Claim 1, wherein said DNA sequence coding for said polypeptide is 3' to said DNA sequence coding for ubiquitin in the direction of transcription.

10 9. A method according to Claim 1, wherein said DNA sequence coding for said polypeptide is 3' to said DNA sequence coding for ubiquitin in the direction of transcription.

15 10. In a method for preparing a mammalian polypeptide in a yeast host, where the polypeptide may be expressed in low percentage amounts of total protein, the improvement which comprises:

20 joining an open reading frame DNA sequence coding for said polypeptide with a second open reading frame DNA sequence coding for heterologous ubiquitin, to form a fusion polypeptide;

25 introducing the sequence coding for said fusion polypeptide under conditions for expression in said yeast, whereby said fusion polypeptide is expressed; and isolating said fusion polypeptide in high yield.

30 11. A method according to Claim 10, wherein said conditions for expression include an inducible transcriptional initiation regulatory region.

35 12. A method according to Claim 11, where said transcriptional initiation regulatory region consists essentially of a glycolytic enzyme promoter region and ADH2 control region.

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13. A DNA sequence coding for ubiquitin joined to a DNA sequence coding for a mammalian polypeptide.

5 14. An expression sequence including in direction of transcription, an inducible transcriptional initiation regulatory region and a DNA sequence according to Claim 13.

10 15. A polypeptide encoded for by a DNA sequence according to Claim 13.

15 16. A polypeptide according to Claim 15, wherein said mammalian polypeptide encodes for at least a portion of proinsulin.

20 17. A polypeptide according to Claim 15, wherein said mammalian polypeptide encodes for at least a portion of IGF-1 or IGF-2.

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